Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

PLANETARY PHENOMENA FOR JANUARY AND FEBRUARY, 1915.

By Malcolm McNeill.

PHASES OF THE MOON, PACIFIC TIME.

Full Moon......	Jan. 1,	$4^h\,21^m$ A.M.	Last Quarter...	Feb. 6,	$9^h\,11^m$ P.M.
Last Quarter...	" 8,	1 13 P.M.	New Moon	" 13,	8 31 P.M.
New Moon	" 15,	6 42 A.M.	First Quarter...	" 21,	6 58 P.M.
First Quarter...	" 22,	9 32 P.M.			
Full Moon	" 30,	8 41 P.M.			

There will be only two eclipses during 1915, both of them central eclipses of the Sun. This is not a very common occurrence, but it happened in 1904. The usual number is four or five. The first of these will not be visible in America, as it will occur on the night of February 13th-14th, P. S. T. As the Moon is in that part of its orbit which is farther than its average distance from the Earth, its apparent size is less than that of the Sun, and the eclipse will be annular, not total. The path of the annulus runs from a point south of Madagascar to the central Pacific, the only large bodies of land encountered being Australia and New Guinea. The second eclipse comes in August and will be referred to in a later paper.

The Earth passes perihelion on the morning of January 2d.

All of the planets except *Saturn* and *Neptune* are in the same quarter of the sky as the Sun, some as morning and some as evening stars.

Mercury is a morning star on January 1st, but too near the Sun for naked-eye observation. It passes superior conjunction on the morning of January 5th and becomes an evening star, retaining this condition until February 21st, then passing inferior conjunction and becoming a morning star again. It reaches its maximum apparent distance from the Sun, 18° 14′, on the afternoon of February 5th, and then remains above the horizon about an hour and a half after sunset. For ten days before this date and a week or so after it will be in fair position for evening observation. As the planet passes perihelion only two days after the time of greatest elongation, its apparent distance from the Sun is nearly the minimum for a greatest elongation, and the length of the period of visibility is smaller than usual. The next period of visibility as an evening star will occur in May and June, and will give a longer and better opportunity for naked-eye view. *Mercury* will be in conjunction with *Mars* on January 1st and February 28th, with *Uranus* on January 20th, and with *Jupiter* on February 1st and February 18th. The planets are too near the Sun for naked-eye views of most of these, but that with *Jupiter* on February 1st can be easily seen if the weather is good. At the time of nearest approach *Mercury* will be 0° 33′ north of *Jupiter*, a trifle more than the Moon's apparent diameter. As seen in this country, however, the distance will be a little more, the time of conjunction not coming until after the planets are below our horizon.

Venus is now a morning star, having passed inferior conjunction with the Sun on November 27, 1914, and will remain a morning star until it reaches superior conjunction on August 14th. It is at its greatest brightness on January 2d, and for a few weeks it will be visible to the naked-eye in full daylight. It slowly increases its apparent distance from the Sun up to February 6th, when it reaches its greatest west elongation, 46° 54′. It passes perihelion on January 6th, but as the orbit is only slightly eccentric this makes little difference in its appearance, as compared to the effect produced under like circumstances on *Mercury* and *Mars*, whose orbits are very eccentric. Thruout January *Venus* will rise rather more than three hours before sunrise, but the interval will shorten up during February to less than two hours and a half.

Mars is a morning star on January 1st, having passed conjunction with the Sun on December 23, 1914, and will remain a morning star thruout the year and until it reaches opposition in February, 1916. On January 1st it rises only a few minutes before sunrise and the interval increases so slowly that it is only a little over half an hour by the end of February. This combined with its comparative faintness, due to the fact that it is on the opposite side of the Sun from us, will make naked-eye view practically impossible during this period.

Jupiter is an evening star on January 1st, setting about three and a half hours after sunset, and is in a fair position in the southwestern sky for early evening observation; but the interval diminishes to about one hour and a half by February 1st, and the planet comes to conjunction with the Sun on February 24th. There is a very close conjunction with the Moon, which becomes an occultation for some parts of the world, on the afternoon of January 17th, and another not quite as close on the afternoon of February 14th.

Saturn is in fine position for observation at almost any time of the night, having been in opposition with the Sun on December 21, 1914. By the end of February it sets at about 2:30 A. M. It is on the border-line between the constellation *Taurus* and *Gemini,* a few degrees south and east of *β Tauri.* Between January 1st and February 25th it moves about 3° westward, and then begins its eastward motion.

Uranus changes from an evening to a morning star on February 1st, when it passes conjunction, but it is too near the Sun for naked-eye view thruout the period.

Neptune comes to opposition with the Sun on January 19th. It is in the eastern part of the constellation *Cancer.*